Name:_____

Delaware Department of Agriculture
Weights and Measures

Examination for Registered Scale Technicians

1. The Delaware Weights and Measures Act is Title 6 Chapter_____.

2. The Act gives weights and measures officials authority over the following equipment:
    1. Devices used solely by a manufacturer for its own purposes
    2. Devices used in the buying and/or selling of a product
    3. Devices used only in determining the weight of raw material used in production

3. Test weights used by scale technicians are required to be certified by a certified NIST laboratory:
    1. As often as determined by the Department of Agriculture
    2. Every two years
    3. Every year
    4. Every three years

4. Following an inspection and test, the weights and measures inspector has the authority to take the following official action:
    1. Approve
    2. Reject
    3. Condemn and seize for evidence
    4. All of the above

5. A registered service technician has the authority to:
    1. Remove from a device an official weights and measures seal or tag
    2. Take a device out of service when it is found to be out of tolerance
    3. Place a device into commercial service following corrective service
    4. All of the above

6. A registered service technician is required to notify weights and measures (send in a Placed in Service Report) within_____day (s) after placing a device into service.

7. A registered service technician should have a current year N.I.S.T Handbook_____.

8. The General Code of Handbook 44 applies to all commercial devices. Paragraphs in The General Code begin with the letter_____. Scale Code paragraphs begin with _____, _____, _____, _____, _____, and _____.

9. G-S.1. is both "retroactive" and "non-retroactive." Subparagraphs (a) and (b) are _____; (c), (d), (e), and (f) are _____.

10. All commercial devices must be marked with the name, initials or trademark of the (a) manufacturer and (b) the model designation.
    1. True
    2. False

11. Scales at the checkout of a supermarket are in error favorable to the owner/operator (scale indications are "fast" - over registering). They are considered to be improperly maintained according to Paragraph G-_____.

12. Paragraph G-_____states that, "Whenever equipment is adjusted, the adjustments shall bring performance errors as close as practicable to_____.

13. Tolerances applied to devices being placed into service for the first time, being officially tested for the first time, after calibration, and following major service or overhaul is _____ tolerance. Scales in service:_____tolerance.

14. The requirements for marked scale accuracy are found in tolerance Table _____.

15. The special tolerances for the shift test is in Paragraph T.N. _____. *(Note: This applies to maintenance tolerance tests only.)*

16. Paragraph N.1.3.7. states that the shift test of a bench or counter scale is conducted at ½ capacity test load. What is the maintenance tolerance for the shift test of a 30 lb x 0.01 lb scale?
    1. 0.005 lb
    2. 0.010 lb
    3. 0.01 lb
    4. 0.02 lb

17. These are the results of the shift test of a Class III scale 50 lb x 0.01 lb: (maintenance tol.)

Scale Indication (lb)	Circle In or Out of Tolerance
25.00	In Out
25.02	In Out
25.01	In Out
24.98	In Out
The scale is	In Out

18. The shift test of a Class III floor scale is tested at _____Capacity on the corners, or _____ capacity in the center of each quarter, according to N.1.3.7.

19. The shift test of a vehicle scale is conducted at a minimum of _____ test load (s) according to N.1.3.4.

20. The *minimum test weight and test load* for a scale test are found in Table _____.

21. The amount of test weight required for a 1,000 lb capacity scale is _____Lb.
Test weight required for a vehicle scale 100 ton x 20 lb is _____Lb
Test weight required for a retail scale 30 lb x 0.01 lb is _____Lb

22. For the increasing-load test:

    A. The tolerance for the substitution test is applied to the scale based on_____.

    B. The tolerance for the strain load test applies to_____.

23. Scales and all attachments (e.g. indicators, bases, load cells, etc.) shall be maintained in proper operating condition throughout the term of service.

    (Paragraph G-UR)

24. If provisions have been made for sealing (a physical seal), the device shall be sealed.

    (Paragraph G-UR)

25. The information required to be marked on a scale, scale base, indicator, load cell, etc., must be easily read, and may be located behind an access cover on scale bases that are not permanently attached to an indicator. The use of a tool such as a screwdriver or wrench is permitted. Marking requirements for nominal capacity, scale division, special applications, e min, v min, n max CLC, section capacity, etc. are listed in Table _and Table_____ (which are the footnotes).